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United States Army
Health Care Studies
and
Clinical Investigation Activity



AD-A210 370

AMBULATORY CARE DATA BASE (ACDB) PROVIDER SURVEY

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HR 89-005B

FINAL REPORT

APRIL 1989

DISTRIBUTION STATEMENT A
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HEALTH SERVICES COMMAND
FORT SAM HOUSTON, TEXAS 78234

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REPORT DOCUMENTATION PAGE

1a. REPORT SECURITY CLASSIFICATION Unclassified		1b. RESTRICTIVE MARKINGS	
2a. SECURITY CLASSIFICATION AUTHORITY		3. DISTRIBUTION/AVAILABILITY OF REPORT Approved for Public Release Distribution Unlimited	
2b. DECLASSIFICATION/DOWNGRADING SCHEDULE			
4. PERFORMING ORGANIZATION REPORT NUMBER(S) HR 89-005B		5. MONITORING ORGANIZATION REPORT NUMBER(S)	
6a. NAME OF PERFORMING ORGANIZATION USA Health Care Studies & Clinical Investigation Activity	6b. OFFICE SYMBOL (If applicable) HSHN-H	7a. NAME OF MONITORING ORGANIZATION DASG-RMP	
6c. ADDRESS (City, State, and ZIP Code) Bldg 2265 Stanley Road Fort Sam Houston, TX 78234-6060		7b. ADDRESS (City, State, and ZIP Code) 5109 Leesburg Pike Falls Church, VA 22041-3258	
8a. NAME OF FUNDING/SPONSORING ORGANIZATION HQDA (DASG-RMB)	8b. OFFICE SYMBOL (If applicable)	9. PROCUREMENT INSTRUMENT IDENTIFICATION NUMBER	
8c. ADDRESS (City, State, and ZIP Code) 5109 Leesburg Pike Falls Church, VA 22041-3258		10. SOURCE OF FUNDING NUMBERS PROGRAM ELEMENT NO. PROJECT NO. TASK NO. WORK UNIT ACCESSION NO.	

11. TITLE (Include Security Classification)
(U) Ambulatory Care Data Base (ACDB) Provider Survey

12. PERSONAL AUTHOR(S) James M. Georgoulakis, LTC, MS, USA, PhD; Sue E. Akins, DAC, B.F.A.; David R. Bolling, DAC, M.S.; Jeffrey P. Moon, MAJ(P), MS, USA, M.S.

13a. TYPE OF REPORT Final Report	13b. TIME COVERED FROM 8/87 TO 12/87	14. DATE OF REPORT (Year, Month, Day) 1989 April	15. PAGE COUNT 75
-------------------------------------	---	---	----------------------

16. SUPPLEMENTARY NOTATION

17. COSATI CODES	18. SUBJECT TERMS (Continue on reverse if necessary and identify by block number) Ambulatory Care; Provider Survey; data reliability; data collection; workload; provider participation	
FIELD	GROUP	SUB-GROUP

19. ABSTRACT (Continue on reverse if necessary and identify by block number)

The Army's ACDB Study collected information on more than 3.1 million patient visits during a 21-month period; more than 4,000 providers were involved at six medical treatment facilities. During the data collection period, various study team members collected anecdotal information from a number of participating providers. Unfortunately, this information was never consolidated and validated. To overcome this deficiency and to provide study participants (the health care providers) with the opportunity to provide input or to evaluate the ACDB study, the ACDB Provider Survey was developed.

The Provider Survey collected information from nearly 500 health care providers and has provided the Army Medical Department with valuable insight on many aspects of the ACDB Study. However, the most important aspect may be in the knowledge that the data contained in the bubble forms not only are valid but also are an accurate representation of the care provided in the outpatient clinics.

20. DISTRIBUTION/AVAILABILITY OF ABSTRACT <input checked="" type="checkbox"/> UNCLASSIFIED/UNLIMITED <input type="checkbox"/> SAME AS RPT. <input type="checkbox"/> DTIC USERS	21. ABSTRACT SECURITY CLASSIFICATION Unclassified
22a. NAME OF RESPONSIBLE INDIVIDUAL James M. Georgoulakis, LTC, MS, USA, Ph.D.	22b. TELEPHONE (Include Area Code) (512) 221-5880
22c. OFFICE SYMBOL HSHN-H	

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ACKNOWLEDGMENTS

Although it is not possible to personally acknowledge all who contributed to the development of the Ambulatory Care Data Base (ACDB) Provider Survey, Lieutenant Colonels John A. Coventry and Irene Begg were instrumental in providing overall project management support. Ms. Pat Twist worked tirelessly to develop a pleasing format for the survey and Louisa Lowman cheerfully typed revisions of questions as they were developed. To everyone in the Health Care Studies Division who contributed questions and to the Project Officers at each of the study sites goes a well earned thanks. Finally, and most importantly, a special thanks to all the providers in the study who found the time in their busy schedules to complete "one more form."

INTRODUCTION

History and Purpose

Recognizing the benefits of an ambulatory care data base, the Army Medical Department began planning in 1984 for a multi-year study to establish an outpatient data base. Based on the results of a 6-month pilot study completed at Fox Army Community Hospital, Redstone Arsenal, Alabama (Misener & Gilbert, 1984), the ACDB Study (Georgoulakis et al, 1988) was initiated to collect clinical data from outpatient encounters (visits). During the 21-month period of the study (January 1986 to September 1987), over 3.1 million patients encounters were recorded from the six study sites, representing more than 4,000 health care providers in some 70 clinical specialties.

This report examines the more salient aspects of the study from the participating health care providers' perspective. In order to quantify

provider input, a structured questionnaire was employed.

Background

At the present time the practice of medicine in both the military and civilian communities is experiencing a great deal of change. Researchers are constantly conducting studies looking for ways to increase the availability of medical care and at the same time reduce the cost of the care. Unfortunately, during the course of these studies researchers frequently fail to provide study participants with an opportunity to furnish input or to evaluate the project. The ACDB study group attempted to overcome this failure by incorporating both formal and informal program evaluation methods into the study design. The informal methods were designed to measure the impact of the study from the provider perspective.

OBJECTIVES

The major objectives of this study were to

1. Solicit input from the provider participants on the adequacy of the individual specialty menus on the patient care collection instruments.
2. Provide a self-report measure from the provider's perspective on the accuracy of the data contained in the clinical sections of the "bubble" forms.
3. Obtain a measure of the amount of time required by the providers to complete the patient encounter (care) forms (commonly called bubble forms).
4. Provide the study providers with a forum to express their views on the project.

METHODOLOGY

Development of Provider Survey

Based on the objectives of the study, the ACDB study team initiated a

series of work sessions to determine the best method to reach the stated objectives. After reviewing a number of options, the study team concluded that a self-administered questionnaire would be most appropriate. A survey was decided on by the study team because it would allow mailings to the study sites and, more importantly, would allow the providers the flexibility of completing the surveys when their busy schedules permitted. Additionally, the use of a survey was the most advantageous in terms of economic and time constraints.

Contents of the Provider Survey

To insure that the providers would be able to comment on as many aspects of the ACDB project as possible, the study team began by developing an item pool of questions centering around five major areas: (1) demographics, (2) utilization of the old patient encounter/bubble forms (forms used prior to 1 May 1987 were designated as old forms), (3) utilization of the new forms (forms used after 1 May 1987 were designated as the new forms), (4) a comparison of the old and new forms with comments and (5) a section for clinical chiefs.

The demographic section consisted of three questions and was designed to provide information on the rank and pay grade of the provider, the length of time the individual had been working in a medical treatment facility, and the specialty area in which they worked most of the time.

The second section contained ten questions relating to the old bubble form. Questions were developed around frequency of use, time required to complete the form, accuracy of information entered in the forms, and adequacy of clinical menus.

The third section consisted of eleven questions relating to the new bubble forms. With the exception of the one additional question which

related to workload, the questions in section two and three were identical.

Section four was designed for users of both the old and new forms. This section contained two questions pertaining to a comparison of the old and new bubble forms, one generic question pertaining to the length of time the provider had been filling out the forms, one question regarding adoption of the form Army-wide, and one open-ended question designed to elicit provider comments on the study.

Section five was primarily for the clinic chiefs and consisted of five questions, four of which related to the use and value of information derived from the bubble forms. The final question was a theoretical compliance question. A copy of the Health Care Provider Survey is located at Appendix A.

Administration of the Provider Survey

During the reliability phase of the study (Moon et al, 1989), the study team provided each point of contact (POC) at the study site with a large number of provider surveys (between 100 and 150 surveys depending on hospital size). Each of the POCs was then instructed to provide each participating provider with a copy of the survey, allowing a reasonable time for completion. The amount of time given to each provider varied by hospital and mission requirements (i.e., no major training exercises or hospital inspections).

Limitations

The unavailability of providers who participated in the study was a major limitation in this project. This was the result of rapid staff turnover caused in most cases by training or teaching requirements. For example, Brooke Army Medical Center, Ft. Sam Houston, Texas, is a teaching hospital which provides medical training in nearly all specialties. Womack Army Community Hospital, Ft. Bragg, North Carolina, and Blanchfield Army Community Hospital, Fort Campbell, Kentucky, are major training centers for the Family

Practice Specialty. Additionally, since the study period covered nearly two calendar years, and the normal tour of duty is three calendar years, each year a number of providers were reassigned to other medical treatment facilities or completed their service obligation and left. No attempt was made to locate these providers, therefore an assumption is made that those who did respond were representative of the whole number of providers.

RESULTS

Section I - Demographic Data

Since the individual POCs used different approaches to the administration and collection of the provider surveys, the number of returned questionnaires varied by hospital. However, there was an order to this variation as the largest hospital in this study, Brooke Army Medical Center, Fort Sam Houston, Texas, returned the most provider surveys; the smallest hospital in the study, Fox Army Community Hospital, returned the fewest number. A total of 493 Provider Surveys was returned. (Appendix B, Table B-1, contains the number of returned surveys for each hospital.)

The most frequent length of time that the providers had either served in the Army and worked in a medical treatment facility (MTF) or were employed by civil service in a medical treatment facility (MTF) was 2-6 years. (See Appendix B, Table B-2, for a frequency distribution of provider's length of service time.)

In terms of the rank of the providers, the Officer Corps represented over 50 percent of the health care providers. (A complete listing of rank and pay grade of providers is found in Appendix B, Table B-3.)

As one might expect, the variety of specialty areas of the providers was quite extensive. However, the largest group of specialty providers was from

Family Practice. (Appendix B, Table B-4 contains a listing of the most frequent provider respondents by specialty).

Results of Section II - Old Bubble Form

This section addressed issues related to the use of the "old" bubble forms (forms used prior to 1 May 1987). A majority of providers, nearly 41 percent, indicated they only completed Section 3 (Provider I.D. and time spent with patient), Section 4 (Evaluation, Services and Procedures) and Section 5 (Diagnosis/Reason for visit). A complete description of the sections of the old bubble forms completed by the providers is contained in Appendix C, Table C-1.

About 33 percent of the providers surveyed indicated they completed more than 20 bubble forms a day, while less than 11 percent indicated that they filled out fewer than five bubble forms per day. A minimal average of 12 forms per day can be calculated by giving those providers who indicated that they completed fewer than five forms a day a value of "one form a day" and those providers who completed more than 20 forms a day a value of "21 forms a day." A more detailed account of old bubble form usage is contained in Appendix C, Table C-2.

The amount of time required to complete the bubble form was essentially equally divided among three groups of providers: Those requiring 21-40 seconds, those needing 41-60 seconds, and those using more than 60 seconds. A categorical summary of old form completion times is located in Appendix C, Table C-3.

Over 76 percent of the providers surveyed indicated they almost always completed a bubble form on a patient. As a corollary, only two percent indicated they almost never completed a bubble form on the patient. Further information on the frequency of provider compliance pertaining to the old

bubble forms is contained in Appendix C, Table C-4.

In terms of accuracy, more than 85 percent of the providers indicated that they usually or almost always were accurate, while only one percent reported they were never accurate. For further information on accuracy of provider information on old bubble forms, see Appendix C, Table C-5.

Additional information in this area was obtained from the question asking providers their perceptions of the accuracy of other providers. Sixty-five percent of the providers answered that their colleagues usually or almost always were accurate. Less than one percent answered that they thought their colleagues were almost never accurate. Appendix C, Table C-6, contains a table of providers' perception of how accurately other providers completed the old bubble forms.

The final four questions in Section II addressed logistical issues in the design of the old bubble form. Approximately 68 percent of the providers indicated that "more than 75% of the time" they could find the desired evaluation/service/procedure and fewer than 4 percent of the providers answered that "less than 25% of the time" could they find the appropriate evaluation/service/procedure. A more detailed analysis regarding the availability of evaluation/service/procedure codes on the old bubble forms is found in Appendix C, Table C-7.

Only 32 percent of the providers indicated they were "very satisfied or satisfied" with the arrangement of the evaluation/service/procedures listed on the old bubble forms. Nearly 52 percent of the providers were either "somewhat dissatisfied or dissatisfied" with the arrangement of this section. A more detailed analysis of providers' views on this issue is contained in Appendix C, Table C-8.

Nearly 65 percent of the providers noted that more than 75 percent of the time they were able to find the desired "primary reason for visit/diagnoses"

on the form. Only five percent of providers reported that less than 25 percent of the time could they find the appropriate primary reason for visit or diagnoses on the old bubble form. Appendix C, Table C-9, contains more information on this question.

In terms of satisfaction, 38 percent indicated they were satisfied with the arrangement of the primary reason for visit/diagnoses on the form. However, 43 percent of the providers were either somewhat dissatisfied or dissatisfied with the arrangement of the primary reason for visit/diagnoses on the old bubble form. (Appendix C, Table C-10, contains a complete summary of the providers' responses to this question.)

Results of Section III - New Bubble Form

The questions contained in Section III pertained to the new bubble forms (forms used after May 1, 1987). These bubble forms went through a substantial revision with the primary objective being to make the forms easier for the provider to use.

Almost 49 percent of the providers indicated they completed those sections which addressed clinical issues (i.e., provider identification number, time spent with patient, evaluation/services/procedures and diagnosis/reason for visit). Nearly 31 percent indicated they completed the entire new bubble form. (See Appendix D, Table D-1, for more information on this question.)

The use of the new bubble forms was fairly consistent throughout the categories with slightly more providers (31 percent) indicating they completed between 11 and 20 forms per day. Moreover, fewer than 11 percent of the providers completed fewer than five new forms a day. (Appendix D, Table D-2, contains more information on use of the new forms.)

The time necessary to complete the new bubble form varied from less than

20 seconds to more than a minute. The majority of providers (32 percent) indicated they required 21-40 seconds to complete the new bubble form. However, nearly 21 percent indicated they required more than a minute to do so. (See Appendix D, Table D-3 for more information on this question.)

More than 90 percent of the providers surveyed indicated they usually or almost always completed a bubble form on the patients they treated. This is in contrast to the one percent who reported they almost never completed a new bubble form on a patient. (For additional information on the frequency of forms completed by providers, see Appendix D, Table D-4.)

In terms of the accuracy of the data entered on the new bubble forms, slightly more than 80 percent of the providers indicated that the information they entered was almost always or usually accurate. Conversely, slightly more than five percent of the providers answered that the information they entered on the new bubble forms was seldom accurate or almost never accurate. (Appendix D, Table D-5 contains a complete analysis of the accuracy of data entered by the providers.) Of the providers surveyed, 68 percent believed that the other providers in their clinic were almost always accurate or usually accurate in entering data in the bubble forms. Fewer than six percent of the providers indicated that the other providers in their clinic were seldom accurate or never accurate in entering data on the new forms. (For additional information on this topic, see Appendix D, Table D-6.)

Since the study providers were requested to do additional work (i.e. complete the bubble forms), the study team was interested in determining the effect of filling out the bubble form on provider workload. The effects proved to be mixed, with about 33 percent of the respondents indicating that completing the bubble form had no effect on their workload and 29 percent indicating that patients waited longer for care. However, only about three

percent believed they had seen fewer patients as a result of completing the new bubble forms. (See Appendix D, Table D-7 for additional provider responses.)

About 67 percent of the providers indicated that 75 percent of the time they were able to locate the evaluations/services/procedures that they performed. Around five percent of the providers responded that less than 25 percent of the time were they able to locate the performed evaluations, services or procedures on the new bubble form. (Appendix D, Table D-8 contains more detailed provider responses to this issue.)

In terms of satisfaction with the arrangement of the evaluation/services/procedures section of the new bubble form approximately 44 percent of the providers indicated that they were either very satisfied or satisfied with the arrangement of the items contained in this section. However, nearly 38 percent of the providers were either somewhat dissatisfied or dissatisfied with the arrangement of this section on the new bubble forms. (See Appendix D, Table D-9 for more information on this topic.)

Nearly 63 percent of the providers indicated that in 75 percent or more of the patient visits they were able to locate the primary reason for visit and, if appropriate, secondary diagnoses. Only about five percent noted they could not locate the appropriate diagnosis or reason for visit in 25 percent or fewer visits. (Appendix D, Table D-10 contains a complete summary of this question on the new bubble form.)

In terms of provider satisfaction with the arrangement of the primary reason for visit and secondary diagnoses, 44 percent of the providers indicated that they were either very satisfied or satisfied with the arrangement. However, 37 percent were either somewhat dissatisfied or dissatisfied with the arrangement of the primary reason for visit and secondary diagnoses on the new bubble forms. (A full description of

providers' responses to this question is contained in Appendix D, Table D-11.)

Results of Section IV - Both Old and New Bubble Forms

Section IV was designed for users of both the old and new forms to evaluate the usefulness of the project. Of those providers who used both forms, slightly more than 58 percent believed that the evaluations/services/procedures section was improved while 14 percent thought the section was not as good. (See Appendix E, Table E-1.)

In terms of the primary reason for visit and secondary diagnoses section, the new form was rated as an improvement over the old form by nearly 55% of the providers. Still, the old form had its supporters; almost 17 percent of the providers preferred this section as it was on the old form. (See Appendix E, Table E-2, for additional information.)

Approximately 62 percent of the providers who completed the survey had been filling out the bubble forms for more than 12 months. Only around four percent indicated they had been completing the form for less than 2 months. (See Appendix E, Table E-3, for a complete analysis of the length of time the providers had been completing the forms.) When queried as to whether or not the bubble forms should be adopted Army-wide, 74 percent responded negatively, 13 percent answered affirmatively with the remaining 13 percent being undecided. (See Appendix E, Table E-4.)

The final item in this section was an open-ended question designed to elicit general comments regarding the project. A total of 302 responses was made by the providers. A content analysis (Scott & Wertheimer, 1966) of these responses resulted in the creation of 33 categories. The four major categories included (1) completing the bubble forms was too time consuming (38 respondents), (2) the bubble form was an additional burden/too time consuming (37 respondents), (3) the project was a waste of time and/or money (37

respondents), and (4) completing the forms detracted from patient care. A complete description of the categories and the frequency of responses is contained in Appendix F.

Results of Section V - Clinic Chiefs' Comments

The final section of the ACDB Provider Survey was designed primarily for clinic chiefs, and related to the use of the bubble form data. Almost 41 percent of the clinic chiefs indicated they had received monthly reports derived from data contained in the bubble forms. However, almost 24 percent of the clinic chiefs noted they had never received a report from their bubble form data. Additional information on this question is contained in Appendix G, Table G-1.

In terms of the usefulness of the information, exactly 60 percent of the clinic chiefs who received the information found it useful to some degree while 40 percent indicated that it was not useful. Appendix G, Table G-2, contains more detailed information on this question.

Some 16 percent of the clinic chiefs indicated that they were not interested in receiving additional reports that could be provided from the bubble form data. However, more than 70 percent of the clinic chiefs expressed some degree of interest in receiving additional reports. The remaining 14 percent were unsure about receiving additional reports. (See Appendix G, Table G-3, for more information on this question.)

Slightly more than 45 percent of the clinic chiefs who responded to the survey believed that the clinical information collected on the bubble form would be useful to the Army Medical Department. The remaining 55 percent of the respondents were essentially divided between not being sure of the usefulness of the data to the Army (27%) and the data not being useful to the Army (28%). (See Appendix G, Table G-4.)

The final question for the clinic chiefs was a theoretical compliance question. The chiefs were asked how they "would go about gaining compliance among staff providers if the bubble form would be used as a billing form." A total of 115 responses were collected from the clinic chiefs. By employing a content analysis methodology, researchers grouped these responses into 26 major response categories. The largest category which accounted for nearly 16 percent of the responses was "the need to hire more clerical help to save provider time." The second largest category, representing 13 percent of the provider responses, included comments such as "inform/educate staff regarding importance of forms for getting resources and staffing." The third largest category, representing 12 percent of the provider responses, was related to recommendations such as "track individual compliance/provide monthly feedback/punish noncompliance." None of the other major categories of provider responses accounted for more than six percent of the total number of responses. A complete summary of the categories and the number of responses for each of the categories is contained in Appendix H.

DISCUSSION

The participation of nearly 500 health care providers in completing the ACDB provider survey has provided the Army Medical Department and ACDB study team with many valuable insights on the project. Some of the more salient points will be discussed in this section.

One of the most useful findings is knowing that the providers completed bubble forms on nearly every patient for whom they provided care. This finding has a number of very important implications. First and foremost, it provides the study team with an additional measure of confidence in the fact that the collected data is an accurate representation of the existing workload

in the ambulatory clinics of the hospitals that participated in the study.

Secondly, when this finding is combined with the finding that more than 85 percent of the providers indicated that they are usually or almost always accurate in the information they entered, the level of confidence increases even more. This makes the data base more relevant for workload estimation as well as for epidemiological studies of incidence of illnesses for various groups. Thirdly, this perceived accuracy of data by providers is supported by the findings of the ACDB Reliability Study (Moon, et al. 1989) which demonstrated that the data entered on the bubble forms was extremely accurate and was as good as any data within or outside the United States Army Medical Department.

The finding that nearly 68 percent of the providers could find the appropriate evaluations/services/procedures 75 percent or more of the time indicates that the types of procedures performed in the various out-patient clinics are performed with a good deal of consistency. Additionally, should the Army Medical Department or the Department of Defense proceed with plans to develop a clinically based management system like the Composite Health Care System (CHCS), the procedures lists developed for the ACDB study could serve as the basis from which to develop a more accurate procedures list. This is also true for the development of a specialty related menu of diagnoses.

Another finding which merits comment is the "effect that completing the bubble form had on provider workloads." The initial effects appeared mixed with about 33 percent of the providers indicating that completing the bubble forms had no effect on their workload and 29 percent responding that patients waited longer for care. This was in reality not as significant as one might initially believe.

An additional analysis proved enlightening. This analysis consisted of taking the average number of forms completed in a day (14.9) and multiplying

it by the average time required to complete a form (42.3 seconds). The result is ten and one half minutes per day per provider. Therefore, for those providers (29%) indicating that patients waited longer for care or for the providers who worked longer hours, the amount of time the patients were waiting or providers were working must have been minimal. Moreover, additional analyses indicated that as a provider became more familiar with a form, his proficiency increased and the time required to complete the form decreased. Thus the additional workload which resulted from using the bubble forms decreased over time. (See Appendix H.)

CONCLUSIONS

The first objective of the study was to solicit input from the health care providers/participants regarding the adequacy of the individual specialty clinical menus. This was accomplished through the review of nearly 500 completed provider surveys representing a broad range of specialties.

The second study objective was to obtain a self-report measure from the providers' perspectives on the accuracy of data entered in the ACDB clinical bubble forms. This was achieved through a number of questions contained in the provider survey, and the findings were validated by a previous study (Moon et al, 1989).

The third objective of the study was to acquire a measure of the amount of time necessary for providers to complete the bubble forms. The findings revealed a decrease in time required for completion of the new bubble form versus the old bubble form. Average time for completion of the old bubble form was 49.4 seconds compared with 42.3 seconds for the new bubble form. This is a decrease of slightly over 7 seconds of time required for completing the new form. An analysis of the data also indicated that the more

forms completed by a provider the less time required to complete each form.

The fourth and final study objective was to provide the health care providers participating in the study the opportunity to express their views on the study. This objective was met by obtaining over 300 written comments by the providers on the project.

The participation of nearly 500 health care providers in completing the Health Care Provider Survey has afforded the Army Medical Department with valuable insights on many aspects of the ACDB study.

SUMMARY

The Army's ACDB study collected information on more than 3.1 million patient visits during a 21-month period; more than 4,000 providers were involved at six medical treatment facilities. During the data collection period, various study team members collected anecdotal information from a number of participating providers. Unfortunately, this information was never consolidated and validated. To overcome this deficiency and to give study participants (the health care providers) with the opportunity to provide input or to evaluate the ACDB study, the ACDB Provider Survey was developed.

The provider survey collected information from nearly 500 health care providers and has provided the Army Medical Department with valuable insight on many aspects of the ACDB Study. However, the most important aspect may be in the knowledge that the data contained in the bubble forms not only are valid but also are an accurate representation of the care provided in the outpatient clinics as measured ;by the responses of the participating providers.

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APPENDIX A



DEPARTMENT OF THE ARMY
HEADQUARTERS, UNITED STATES ARMY HEALTH SERVICES COMMAND
FORT SAM HOUSTON, TEXAS 78234-6000

REPLY TO
ATTENTION OF:

HSHN-P

10 August 1987

MEMORANDUM FOR: Ambulatory Care Data Base Health Care Providers

SUBJECT: Health Care Provider Survey

1. The data collection phase of the Ambulatory Care Data Base (ACDB) project is ending. After all remaining "bubble forms" are scanned, the central data base will contain almost 3 million encounter records representing ambulatory medical practice in more than 50 different specialties from the 6 medical treatment facilities which served as test sites. These data and the analysis being planned are extremely important to the future of the Army Medical Department (AMEDD). Your efforts in completing the mark sense encounter forms are greatly appreciated by both The Surgeon General and me.
2. The study is now in the evaluation phase, an important part of which is assessing provider experience and satisfaction with the bubble forms. To assist the investigators at the U.S. Army Health Care Studies and Clinical Investigation Activity (HCSCIA) with this evaluation, please take a few minutes to answer the attached questions and return the questionnaire to your local point of contact. The questionnaire will take you less than 10 minutes to complete.
3. Your participation and that of your fellow health care providers is crucial to the completion of the ACDB study. Future efforts in designing data capture methods and in developing and utilizing appropriate "menus" of diagnoses and procedures to encompass the range of practice in each specialty and for each provider type will be based, in part, on your response.
4. Thank you very much for your thoughtful participation and assistance.



TRACY E. STREVEY, JR.
Major General, MC
Commanding

AMBULATORY CARE DATA BASE PROVIDER SURVEY

DO NOT USE
THIS SPACE

SECTION I
(Please circle the appropriate response.)

ID (1-6)

A. How long have you been in the Army and working in a Medical Treatment Facility (MTF) or employed by Civil Service at a MTF? (7)

1. Less than 2 years
2. 2 to 6 years
3. 7 to 10 years
4. Over 10 years

B. What is your present rank/pay grade? (8)

1. E-1 to E-5
2. E-6 to E-9
3. Officer Warrant
4. Officer O-1 to O-3
5. Officer O-4 to O-6
6. Civilian GS 1 to GS 7
7. Civilian GS 8 to GS 16
8. Personal Service Contract Civilian

C. In which specialty area do you work most of the time? (9,10)

01. Adolescent	18. General Surgery	36. Pain Control
02. Allergy	19. Gynecology	37. Pediatrics
03. Audiology	20. Immunizations	38. Physical Medicine
04. Cardiology	21. Infectious Disease	39. Physical Therapy
05. Cardiothorac Surg	22. Inhalation/Resp Ther	40. Plastic Surgery
06. Cast	23. Internal Medicine	41. Podiatry
07. Comm Health Nurse	24. Nephrology/Dialysis	42. Preventive Med
08. Brace/Ortho Appl	25. Neurology	43. Primary Care (AMIC/ACC/Med Exam)
09. Dermatology	26. Neurosurgery	44. Psychiatry
10. EFMP	27. Nutrition	45. Psychology
11. EKG	28. Obstetrics	46. Pulmonary
12. Emergency Room	29. Occupational Health	47. Rheumatology
13. Endocrine	30. Occupational Therapy	48. Social Work
14. ENT	31. Oncology/Hematology	49. Speech Pathology
15. Family Practice	32. Ophthalmology	50. Troop Med Clinic
16. Flight Medicine	33. Optometry	51. Urology
17. Gastroenterology	34. Orthopedics	52. Other
	35. Otorhinolaryngology	

SECTION II

Section II pertains to BUBBLE FORMS used before 1 May 1987 which will be referred to as OLD BUBBLE FORMS. If you filled out the OLD BUBBLE FORMS, please answer the questions in this section, otherwise skip to Section III.

A. Indicate ALL the portions of the OLD BUBBLE FORM you NORMALLY completed (you may choose more than one). _____ (11)

1. PATIENT SECTION - Date, Sponsor's Soc Sec No & Family Member Prefix _____ (12)
2. ADMINISTRATION SECTION - UCA Data, Place of Visit, Appt Status, Status of Visit _____ (13)
3. PROVIDER SECTION - Provider ID, Time Spent with Patient _____ (14)
4. EVALUATIONS/SERVICES/PROCEDURES _____ (15)
5. DIAGNOSIS/REASON FOR VISIT

B. Approximately how many OLD BUBBLE FORMS did you fill out on an average clinic day? _____ (16)

1. Less than 5 a day
2. 6-10 a day
3. 11-20 a day
4. More than 20 a day
5. Not sure

C. For the portions of the OLD BUBBLE FORM that you NORMALLY completed, how much time on the average did you spend on each form? _____ (17)

1. Less than 20 seconds
2. 21-40 seconds
3. 41-60 seconds
4. Over 60 seconds

D. How often did you fill out an OLD BUBBLE FORM on your patients? _____ (18)

1. Almost always
2. Usually
3. About half the time
4. Seldom
5. Almost never
6. Not sure

E. How accurate is the information that you marked on the OLD BUBBLE FORM? _____ (19)

1. Almost always accurate
2. Usually accurate
3. Accurate about half the time
4. Seldom accurate
5. Almost never accurate

F. In your opinion how accurate is the information that OTHER PROVIDERS in your CLINIC marked on the OLD BUBBLE FORM? _____ (20)

1. Almost always accurate
2. Usually accurate
3. Accurate about half the time
4. Seldom accurate
5. Almost never accurate
6. Not Sure

G. Approximately what percentage of the time were you able to find (on the OLD BUBBLE FORM) the EVALUATIONS/SERVICES/PROCEDURES that you perform in the outpatient setting? _____ (21)

1. Around 90 percent
2. Around 75 percent
3. Around 50 percent
4. Around 25 percent
5. Less than 25 percent

H. How satisfied are you with the arrangement of the EVALUATIONS/SERVICES/PROCEDURES on the OLD BUBBLE FORM? _____ (22)

1. Very satisfied
2. Satisfied
3. Not Sure
4. Somewhat dissatisfied
5. Dissatisfied

I. Approximately what percentage of the time were you able to find the PRIMARY REASON FOR VISIT and SECONDARIES (DIAGNOSES) on the OLD BUBBLE FORM? _____ (23)

1. Around 90 percent
2. Around 75 percent
3. Around 50 percent
4. Around 25 percent
5. Less than 25 percent

J. How satisfied were you with the arrangement of the PRIMARY REASON FOR VISIT AND SECONDARIES on the OLD BUBBLE FORM? _____ (24)

1. Very satisfied
2. Satisfied
3. Not Sure
4. Somewhat dissatisfied
5. Dissatisfied

SECTION III

SECTION III pertains to the BUBBLE FORMS used after 1 May 1987 which will be referred to as the NEW BUBBLE FORMS. Please complete this section if you used the NEW BUBBLE FORMS.

A. Mark all the portions of the NEW BUBBLE FORM you normally completed (you may choose more than one section). _____ (25)

1. ADMINISTRATIVE SECTION - Date, Sponsor's Soc Sec No and Family Member Prefix, & optional fills for UCA, Appt status, etc. _____ (26)
2. PROVIDER SECTION - Provider ID, Time Spent with Patient & optional fill for Job Rel Ill/Inj, Military Disposition, etc. _____ (27)
3. EVALUATIONS/SERVICES/PROCEDURES _____ (28)
4. DIAGNOSIS/REASON FOR VISIT

B. Approximately how many NEW BUBBLE FORMS did you fill out on an average clinic day? _____ (29)

1. Less than 5 a day
2. 6-10 a day
3. 11-20 a day
4. More than 20 a day
5. Not sure

C. For the portions of the NEW BUBBLE FORM that you NORMALLY completed, how much time on the average did you spend on each form? _____ (30)

1. Less than 20 seconds
2. 21 to 40 seconds
3. 41 to 60 seconds
4. Over 60 seconds

D. How often did you fill out a NEW BUBBLE FORM on your patients? _____ (31)

1. Almost always
2. Usually
3. About half the time
4. Seldom
5. Almost never
6. Not sure

E. How accurate is the information that you marked on the NEW BUBBLE FORM? _____ (32)

1. Almost always accurate
2. Usually accurate
3. Accurate about half the time
4. Seldom accurate
5. Almost never accurate

F. In your opinion how accurate is the information that OTHER PROVIDERS in your CLINIC marked on the NEW BUBBLE FORM? _____ (33)

1. Almost always accurate
2. Usually accurate
3. Accurate about half the time
4. Seldom accurate
5. Almost never accurate
6. Not Sure

G. What was the effect filling out the NEW BUBBLE FORM had on your workload? _____ (34)
(Choose more than one, if applicable.)

1. No effect
2. Patients waited longer for care
3. I saw fewer patients
4. I worked longer hours

H. Approximately what percentage of the time were you able to find (on the NEW BUBBLE FORM) the EVALUATIONS/SERVICES/PROCEDURES that you perform in the outpatient setting? _____ (35)

1. Around 90 percent
2. Around 75 percent
3. Around 50 percent
4. Around 25 percent
5. Less than 25 percent

I. How satisfied are you with the arrangement of the EVALUATIONS/SERVICES/PROCEDURES on the NEW BUBBLE FORM? _____ (36)

1. Very satisfied
2. Satisfied
3. Not Sure
4. Somewhat dissatisfied
5. Dissatisfied

J. Approximately what percentage of the time were you able to find the PRIMARY REASON FOR VISIT and SECONDARIES (DIAGNOSES) on the NEW BUBBLE FORM? _____ (37)

1. Around 90 percent
2. Around 75 percent
3. Around 50 percent
4. Around 25 percent
5. Less than 25 percent

K. How satisfied are you with the arrangement of the PRIMARY REASON FOR VISIT AND SECONDARIES on the NEW BUBBLE FORM? _____ (38)

1. Very satisfied
2. Satisfied
3. Not Sure
4. Somewhat dissatisfied
5. Dissatisfied

SECTION IV

Users of BOTH the OLD and NEW BUBBLE FORMS should complete this section.

A. In your PROFESSIONAL OPINION how would you rate the EVALUATIONS/SERVICES/PROCEDURES section of the NEW BUBBLE FORM compared to the same section of the OLD BUBBLE FORM? _____ (39)

1. Did not use old form
2. Greatly improved
3. Moderately improved
4. Improved
5. About the same
6. Not as good

B. In your PROFESSIONAL OPINION how would you rate the PRIMARY REASON FOR VISIT AND SECONDARIES (DIAGNOSIS) section of the NEW BUBBLE FORM compared to the PRIMARY REASON FOR VISIT AND SECONDARIES (DIAGNOSIS) section of the OLD BUBBLE FORM? _____ (40)

1. Did not use old form
2. Greatly improved
3. Moderately improved
4. Improved
5. About the same
6. Not as good

C. How long have you been filling out the BUBBLE FORMS? _____ (41)

1. Less than 2 months
2. 2 to 4 months
3. 5 to 9 months
4. 9 to 12 months
5. Over 12 months

D. Do you believe the encounter form such as the one you have been using should be adopted Army-wide? _____ (42)

1. Yes
2. No
3. Don't know

E. Thank you for completing this survey. Is there anything else you want to add? _____ (43)

COMMENTS:

(CLINIC CHIEFS, Please complete back side.)

AMBULATORY CARE DATA BASE PROVIDER SURVEY

ADDITIONAL QUESTIONS FOR CLINIC CHIEFS

A. How often do you receive reports or information from the BUBBLE Forms? _____ (44)

1. More than once a month
2. Once a month
3. Every other month
4. Less than every other month
5. Never

B. How useful is the information (for you or your clinic) that you receive from the BUBBLE FORMS? _____ (45)

1. Very useful
2. Useful
3. Moderately useful
4. Marginally useful
5. Not useful
6. Never receive any information

C. If additional information on your patients could be provided to you from the BUBBLE forms, how interested would you be in receiving it? _____ (46)

1. Very interested
2. Somewhat interested
3. Not sure
4. Possibly interested
5. Not at all interested

D. In your PROFESSIONAL OPINION do you think the clinical information collected on the BUBBLE FORM will be useful to the Army Medical Department? _____ (47)

1. Very useful
2. Moderately useful
3. Useful
4. Not sure
5. Not useful

5. Assuming that the BUBBLE FORM would be used as a "BILLING FORM" for workload documentation and justifying resources, i.e., staff, equipment, training, etc., how would YOU go about gaining COMPLIANCE among providers? _____ (48)

APPENDIX B

APPENDIX B
TABLE B-1

NUMBER OF RETURNED PROVIDER SURVEYS
BY
STUDY SITE
(N=493)

STUDY SITE	NUMBER OF RETURNED SURVEYS
Brooke Army Medical Center (Fort Sam Houston) Texas	188
Blanchfield Army Community Hospital (Fort Campbell) Kentucky	103
Womack Army Community Hospital (Fort Bragg) North Carolina	94
Bayne-Jones Army Community Hospital (Fort Polk) Louisiana	62
Moncrief Army Community Hospital (Fort Jackson) South Carolina	29
Fox Army Community Hospital (Redstone Arsenal) Alabama	17
<hr/>	
TOTAL	493
<hr/>	

APPENDIX B
TABLE B-2

DEMOGRAPHIC INFORMATION
PROVIDER LENGTH OF SERVICE
(N=493)

PROVIDER LENGTH OF SERVICE	NUMBER
Less than 2 years	80
2-6 years	182
7-10 years	98
Over 10 years	133
TOTAL	493

APPENDIX B
TABLE B-3

DEMOGRAPHIC INFORMATION
PROVIDER RANK OR PAY GRADE
(N= 492)

RANK OR PAY GRADE	NUMBER
E-1 to E-5	81
E-6 to E-9	30
Warrant Officer	13
Officer O-1 to O-3	119
Officer O-4 to O-6	133
Civilian GS-1 to GS-7	52
Civilian GS-8 to GS-16	61
Personal Service Contract (Civilian)	3
TOTAL	492

APPENDIX B
TABLE B-4

MOST FREQUENT PROVIDER RESPONDENTS
BY SPECIALTY*
N > 10

SPECIALTY	NUMBER
Family Practice	35
Emergency Room	34
Internal Medicine	33
Pediatrics	31
Troop Medical Clinic	28
Physical Therapy	25
Gynecology	18
Occupational Health	17
Ophthalmology	16
Social Work	16
Occupational Therapy	14
Oncology/Hematology	14
Allergy	13
Orthopedics	13
Podiatry	11
TOTAL	318

* There was a total of 51 specialties listed by the providers.

APPENDIX C

APPENDIX C
TABLE C-1

SECTIONS OF OLD BUBBLE FORMS

COMPLETED BY PROVIDERS
N=424

SECTION COMPLETED	NUMBER OF PROVIDERS
Didn't complete any sections	37
Evaluation/services/procedures section and diagnosis/reason for visit section	23
Provider section, evaluation/services/procedures section and diagnosis/reason for visit section	172
Patient section, provider section, evaluation/services/procedures section & diagnosis/reason for visit section	20
Administration section, provider section, evaluations/services/procedures section & diagnosis/reason for visit section	37
All the sections on the form	135
TOTAL	424

APPENDIX C
TABLE C-2

PROVIDER USAGE OF OLD BUBBLE FORM
N=465

NUMBER OF FORMS COMPLETED PER DAY	NUMBER OF PROVIDERS
Less than 5	50
Between 6 and 10	117
Between 11 and 20	134
More than 20	153
Unsure	11
TOTAL	465

APPENDIX C
TABLE C-3

PROVIDER TIME REQUIRED
TO
COMPLETE THE OLD BUBBLE FORM
N=466

TIME IN SECONDS	NUMBER OF PROVIDERS
Less than 20 seconds	33
Between 21 and 40 seconds	138
Between 41 and 60 seconds	148
More than 60 seconds	147
TOTAL	466

APPENDIX C
TABLE C-4

FREQUENCY OF OLD BUBBLE FORMS
COMPLETED ON PATIENTS
N=468

FREQUENCY	NUMBER OF PROVIDERS
Almost always	360
Usually	62
About half the time	28
Seldom	6
Almost never	10
Not sure	2
TOTAL	468

APPENDIX C
TABLE C-5

ACCURACY OF PROVIDER INFORMATION
ON OLD BUBBLE FORMS
N=467

DEGREE OF ACCURACY	NUMBER OF PROVIDERS
Almost always accurate	185
Usually accurate	213
Accurate about half the time	50
Seldom accurate	13
Almost never accurate	6
Not sure	0
TOTAL	467

APPENDIX C
TABLE C-6

PROVIDER PERCEPTIONS ON HOW ACCURATELY OTHER PROVIDERS
COMPLETED THE OLD BUBBLE FORM
N=465

DEGREE OF ACCURACY	NUMBER OF PROVIDERS
Almost always accurate	112
Usually accurate	192
Accurate about half the time	96
Seldom accurate	18
Almost never accurate	4
Not sure	43
TOTAL	465

APPENDIX C
TABLE C-7

PERCENTAGE OF TIME PROVIDERS COULD LOCATE
THE APPROPRIATE EVALUATIONS/SERVICES/PROCEDURES
ON THE OLD BUBBLE FORMS
N=463

PERCENTAGE OF TIME ITEM LOCATED	NUMBER OF PROVIDERS
About 90 percent of the time	129
About 75 percent of the time	184
About 50 percent of the time	113
About 25 percent of the time	20
Less than 25 percent of the time	17
TOTAL	463

APPENDIX C
TABLE C-8

PROVIDER SATISFACTION WITH THE ARRANGEMENT
ON THE OLD BUBBLE FORM OF
THE EVALUATIONS/SERVICES/PROCEDURES SECTION
N=463

DEGREE OF PROVIDER SATISFACTION	NUMBER OF PROVIDERS
Very satisfied	14
Satisfied	136
Not sure	73
Somewhat dissatisfied	117
Dissatisfied	123
TOTAL	463

APPENDIX C
TABLE C-9

PERCENTAGE OF TIME PROVIDER WAS ABLE TO LOCATE
REASON FOR VISIT/DIAGNOSES
ON THE OLD BUBBLE FORMS
N=462

PERCENTAGE OF TIME ITEM LOCATED	NUMBER OF PROVIDERS
About 90 percent of the time	106
About 75 percent of the time	194
About 50 percent of the time	117
About 25 percent of the time	21
Less than 25 percent of the time	24
TOTAL	462

APPENDIX C

TABLE C-10

PROVIDER SATISFACTION WITH THE ARRANGEMENT
OF THE OLD BUBBLE FORMPRIMARY REASON FOR VISIT/DIAGNOSES SECTION
N=464

DEGREE OF PROVIDER SATISFACTION	NUMBER OF PROVIDERS
Very satisfied	18
Satisfied	160
Not sure	84
Somewhat dissatisfied	114
Dissatisfied	88
TOTAL	464

APPENDIX D

APPENDIX D
TABLE D-1

SECTIONS OF NEW BUBBLE FORMS
COMPLETED BY PROVIDERS
N=411

NAME OF SECTION	NUMBER OF PROVIDERS
Didn't complete any sections	41
Evaluations/services/procedures section and diagnosis/reason for visit section	43
Provider section, evaluations/services/procedures section and diagnosis/ and reason for visit section	200
Patient section/provider section / evaluations/services/procedures section and diagnosis/reason for visit section	127
TOTAL	411

APPENDIX D
TABLE D-2

PROVIDER USAGE OF NEW BUBBLE FORM
N=468

NUMBER OF FORMS COMPLETED PER DAY	NUMBER OF PROVIDERS
Less than 5	50
Between 6 and 10	122
Between 11 and 20	146
More than 20	138
Unsure	12
TOTAL	468

APPENDIX D
TABLE D-3

PROVIDER TIME REQUIRED
TO
COMPLETE THE NEW BUBBLE FORM
N=467

TIME IN SECONDS	NUMBER OF PROVIDERS
Less than 20 seconds	79
Between 21 and 40 seconds	150
Between 41 and 60 seconds	142
More than 60 seconds	96
 TOTAL	467

APPENDIX D
TABLE D-4

FREQUENCY OF TIME WHEN NEW BUBBLE FORMS
WERE COMPLETED ON PATIENTS
N=468

FREQUENCY	NUMBER OF PROVIDERS
Almost always	341
Usually	81
About half the time	28
Seldom	11
Almost never	5
Not sure	2
 TOTAL	468

APPENDIX D
TABLE D-5

ACCURACY OF PROVIDER INFORMATION
ON NEW BUBBLE FORMS
N=468

DEGREE OF ACCURACY	NUMBER OF PROVIDERS
Almost always accurate	219
Usually accurate	157
Accurate about half the time	67
Seldom accurate	16
Almost never accurate	9
Not sure	0
TOTAL	468

APPENDIX D
TABLE D-6

PROVIDER PERCEPTION OF HOW ACCURATELY OTHER PROVIDERS
COMPLETED THE NEW BUBBLE FORM
N=466

DEGREE OF ACCURACY	NUMBER OF PROVIDERS
Almost always accurate	127
Usually accurate	190
Accurate about half the time	71
Seldom accurate	22
Almost never accurate	6
Not sure	50
TOTAL	466

APPENDIX D
TABLE D-7

EFFECTS ON PATIENT CARE
AS A RESULT OF COMPLETING
THE NEW BUBBLE FORMS
N=450

EFFECT	PROVIDER RESPONSE
No effect	150
Patients waited longer for care	131
I saw fewer patients	14
I worked longer hours	88
Patients waited longer for care and I worked longer hours	53
Patients waited longer for care, I saw fewer patients and I worked longer hours	14
TOTAL	450

APPENDIX D
TABLE D-8

PERCENTAGE OF TIME PROVIDERS COULD LOCATE
THE APPROPRIATE EVALUATIONS/SERVICES/PROCEDURES
ON THE NEW BUBBLE FORMS
N=464

PERCENTAGE OF TIME ITEM LOCATED	NUMBER OF PROVIDERS
Around 90 percent of the time	139
Around 75 percent of the time	170
Around 50 percent of the time	106
Around 25 percent of the time	28
Less than 25 percent of the time	21
TOTAL	464

APPENDIX D
TABLE D-9

PROVIDER SATISFACTION WITH THE ARRANGEMENT
OF THE EVALUATIONS/SERVICES/PROCEDURES SECTION
ON THE NEW BUBBLE FORM
N=467

DEGREE OF PROVIDER SATISFACTION	NUMBER OF PROVIDERS
Very satisfied	38
Satisfied	168
Not sure	84
Somewhat Dissatisfied	100
Dissatisfied	77
TOTAL	467

APPENDIX D
TABLE D-10

PERCENTAGE OF TIME
PROVIDER WAS ABLE TO LOCATE REASON FOR VISIT/DIAGNOSES
ON NEW BUBBLE FORM
N=464

PERCENTAGE OF TIME ITEM LOCATED	NUMBER OF PROVIDERS
About 90 percent of the time	131
About 75 percent of the time	159
About 50 percent of the time	114
About 25 percent of the time	37
Less than 25 percent of the time	23
TOTAL	464

APPENDIX D
TABLE D-11
PROVIDER SATISFACTION WITH THE ARRANGEMENT OF
THE EVALUATIONS/SERVICES/PROCEDURES SECTION
OF THE NEW BUBBLE FORM
N=465

DEGREE OF SATISFACTION	NUMBER OF PROVIDERS
Very satisfied	35
Satisfied	169
Not sure	88
Somewhat dissatisfied	98
Dissatisfied	75
 TOTAL	465

APPENDIX E

APPENDIX E
TABLE E-1

PROVIDER COMPARISON OF THE
EVALUATIONS/SERVICES/PROCEDURES SECTION OF
THE OLD AND NEW BUBBLE FORMS
N=452

PROVIDER RESPONSE	NUMBER OF PROVIDERS
Did not use old form	13
Greatly improved	57
Moderately improved	94
Improved	105
About the same	121
Not as good	62
TOTAL	452

APPENDIX E
TABLE E-2

PROVIDER COMPARISON OF THE
PRIMARY REASON FOR VISIT/DIAGNOSIS SECTION OF THE
OLD AND NEW BUBBLE FORMS
N=453

PROVIDER RESPONSE	NUMBER OF PROVIDERS
Did not use old form	12
Greatly improved	53
Moderately improved	90
Improved	99
About the same	125
Not as good	74
TOTAL	453

APPENDIX E
TABLE E-3

LENGTH OF TIME PROVIDERS WERE COMPLETING
BOTH OLD AND NEW BUBBLE FORMS
N=457

LENGTH OF TIME	NUMBER OF PROVIDERS
Less than 2 months	19
Between 2 and 4 months	18
Between 5 and 9 months	58
Between 9 and 12 months	79
Over 12 months	283
 TOTAL	457

APPENDIX E
TABLE E-4
QUESTION FOR USERS OF BOTH OLD AND NEW FORMS
REGARDING ARMY-WIDE ADOPTION OF THE FORMS
N=463

RESPONSE	NUMBER OF PROVIDERS
Yes	69
No	336
Don't know	58
 TOTAL	463

APPENDIX F

APPENDIX F
PROVIDERS' GENERAL COMMENTS REGARDING THE ACDB PROJECT
N=302

COMMENT	NUMBER OF PROVIDERS
1. Too time consuming.	38
2. Additional burden/too much work.	37
3. Waste of time and/or money.	37
4. Forms detracted from patient care.	23
5. Needed additional clerical help for completion of data on forms.	18
6. Feel data collected not accurate (i.e., used approximate Diagnosis, etc.)	15
7. Poor design/bad plan	12
8. Didn't like revised Diagnoses & Procedures lists (i.e., not enough Diagnoses, etc.)	12
9. Should discontinue use.	12
10. Didn't like.	11
11. Forms need further improvement/simplification	10
12. Duplication of effort	10
13. Good means of showing accountability	10
14. Needed feedback.	9
15. Not useful to providers or patients, an administrative tool only	8
16. Good idea, but.....	7
17. Felt 'not heard' regarding input for forms revision.	5
18. Bar Code System should be used.	3
19. Forms were improved in organization.	3
20. Feedback received not accurate	3

APPENDIX F
PROVIDERS' GENERAL COMMENTS REGARDING THE ACDB PROJECT (Continued)

COMMENT	NUMBER OF PROVIDERS
21. Highly recommend continued use.	3
22. Felt deceived regarding stated purpose of forms/ length of study.	2
23. Used reports from data collected to track injury trends/clinic activities, etc.	2
24. Recommend Army-wide usage if other systems of counting workload are abandoned.	2
25. Switch to a computerized system cross-referenced with ICD-9-CM Codes in a mainframe	2
26. Saw possible worldwide database through interface through w/MIS in the medical treatment facilities.	1
27. "Time spent with patient" is a useless statistic	1
28. Should keep Disposition Box	1
29. Hope gains are worth the time spent	1
30. Should retain patient designations of "old" and "new" as this explains time spent	1
31. Money is needed more for other more important areas of patient care, i.e., TDY for CMEs, support personnel, etc.	1
32. Fire the person who inflicted bubble forms on us.	1
33. The busier the department, the more likely data will be inaccurate and underestimate workload.	1

APPENDIX G

APPENDIX G
TABLE G-1
CLINIC CHIEFS' RESPONSES REGARDING
FREQUENCY OF BUBBLE FORM REPORTS
N=123

RESPONSE	NUMBER OF PROVIDERS
More than once a month	4
Once a month	50
Every other month	6
Less than every other month	34
Never	29
TOTAL	123

APPENDIX G
TABLE G-2
CLINIC CHIEFS' RESPONSES REGARDING
USEFULNESS OF BUBBLE FORM REPORTS
N=126

RESPONSES	NUMBER OF PROVIDERS
Very useful	6
Useful	11
Moderately useful	14
Marginally useful	29
Not useful	40
Never received information	26
TOTAL	126

APPENDIX G
TABLE G-3

CLINIC CHIEFS' RESPONSES REGARDING
DEGREE OF INTEREST IN RECEIVING ADDITIONAL
PATIENT INFORMATION
N=124

RESPONSES	NUMBER OF PROVIDERS
Very interested	24
Somewhat interested	36
Not sure	17
Possibly interested	27
Not at all interested	20
TOTAL	124

APPENDIX G
TABLE G-4

CLINIC CHIEFS' RESPONSES REGARDING
USEFULNESS OF CLINICAL INFORMATION
N=126

RESPONSES	NUMBER OF PROVIDERS
Very useful	20
Moderately useful	20
Useful	17
Not sure	34
Not useful	35
TOTAL	126

APPENDIX H

APPENDIX H
 CLINIC CHIEFS' GENERAL COMMENTS REGARDING
 INCREASING PROVIDER COMPLIANCE
 N=115

COMMENT	NUMBER OF PROVIDERS
1. Hire more clerical help to save providers' time.	18
2. Inform/educate staff regarding importance of forms for getting resources and staffing.	15
3. Track individual compliance/provide monthly feedback/punish noncompliance.	14
4. Simplify/shorten form.	7
5. Don't think bubble sheets can be used to justify workload.	7
6. Eliminate duplicate reports.	5
7. Incentive awards (i.e., personal recognition, compensatory time, money).	4
8. Make it mandatory.	4
9. Can't gain compliance without drastic measures (i.e., pay/VCMJ)	4
10. Would not gain compliance because system was not working for capturing data.	4
11. Don't know.	4
12. Crosscheck bubble sheets against sign-in sheets	4
13. Directly relate resources to bubble sheet data	3
14. Use hand/other type computer for tabulating.	3
15. Monitor statistics gathered from forms and feedback to providers useful information on clinic workload, types of patient visits, etc.	3
16. Provide quarterly feedback from Commander, HSC.	2
17. Would have to see fewer patients or find some other way to gather data.	2
18. Menus need to be more precise to capture accurate picture.	2

19. Make turning in the correct number of forms the provider's ticket out of each clinic session.	2
20. No problem.	2
21. Give classes in how to complete forms properly.	1
22. Allow 48-hr backlog per provider	1
23. Break leg/arm. Put a hit contract on rebels.	1
24. Use as 4th copy for SF558. For each SF558, must have one "billing form."	1
25. Because of inaccuracy and noncompliance, it is a waste of time.	1
26. More resources required in order to provide adequate services.	1